

Mineral Industry Surveys

For information, contact:

Kim B. Shedd, Cobalt Commodity Specialist
U.S. Geological Survey
989 National Center
Reston, VA 20192
Telephone: (703) 648-4974, Fax: (703) 648-7757
E-mail: ksheddd@usgs.gov

Jo-Ann Sterling (Data)
Telephone: (703) 648-7953
Fax: (703) 648-7975
E-mail: jsterlin@usgs.gov

Internet: <http://minerals.usgs.gov/minerals>

COBALT IN MAY 2004

On the basis of preliminary data, U.S. cobalt consumption during January through May 2004 was nearly equal in amount to that consumed during the first 5 months of 2003, according to the U.S. Geological Survey. The amount of cobalt contained in U.S. imports of cobalt metals and chemicals was 20% higher during January through April 2004 than that of imports during the same period in 2003. The amount of cobalt contained in U.S. exports of unwrought cobalt and chemicals was 21% higher during January through April 2004 than that of exports during the same period in 2003. Trade data for May 2004 will be available in a subsequent issue.

Price

Prices for electrolytic cobalt, in dollars per pound from Platts Metals Week, are listed below.

<u>Date</u>	<u>Price range</u>
June 24	25.00-26.00
July 1	25.00-25.70
July 8	25.00-25.75

<u>Month</u>	<u>Average price</u>
June	25.56

TABLE 1
U.S. REPORTED CONSUMPTION OF COBALT MATERIALS¹

(Metric tons, contained cobalt)

Period	Metal ²	Oxide and other chemical compounds ³	Scrap	Total
2003:				
May	266	166	167	599
June	254	169	167	590
July	250	157	167	574
August	254	164	167	585
September	259	168	167	594
October	252	165	167	584
November	265	155	167	588
December	241	156	167	565
January-May	1,280	815	836	2,930
January-December ⁴	3,060	1,950	2,010	7,010
2004:				
January	263	224	167	654
February	258	183	167	609
March	233	170	167	571
April	237 ^r	174	167	580
May	237	161	167	566
January-May	1,230	912	837	2,980

^rRevised.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Includes metal powder.

³Data may include other cobalt materials.

⁴Data based on monthly reports.

TABLE 2
U.S. REPORTED CONSUMPTION OF COBALT, BY END USE¹

(Metric tons, contained cobalt)

End use	2003		2004	
	January- May ^r	January- December ²	May	January- May ³
Steel	158	366	35	177
Superalloys	1,320	3,170	244	1,260
Magnetic alloys	160	385	28	141
Other alloys ⁴	W	W	W	W
Cemented carbides ⁵	282	679	58	293
Chemical and ceramic uses ⁶	896	2,140	178	995
Miscellaneous and unspecified	114	273	23	113
Total	2,930	7,010	566	2,980

^rRevised. W Withheld to avoid disclosing company proprietary data; included with "Miscellaneous and unspecified."

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Data based on monthly reports.

³May include revisions to prior months.

⁴Includes nonferrous alloys, welding materials, and wear-resistant alloys.

⁵Includes diamond tool matrices, cemented and sintered carbides, and cast carbide dies or parts.

⁶Includes catalysts, driers in paints or related usages, feed or nutritive additives, glass decolorizer, ground coat frit, pigments, and other uses.

TABLE 3
U.S. REPORTED STOCKS OF COBALT MATERIALS¹

(Metric tons, contained cobalt)

Period	Industry ²				U.S. Government, metal ⁵
	Metal ³	Oxide and other chemical compounds ⁴	Scrap	Total	
2003:					
May	366	206	188	760	5,450
June	366	200	188	754	5,240
July	369	216	188	773	5,040
August	387	206	188	781	4,990
September	402	206	188	795	4,930
October	396	203	188	787	4,750
November	368	203	188	759	4,640
December ⁶	387	204	188	779	4,290
2004:					
January	358	204	104	666	3,900
February	325	193	104	622	3,410
March	363	218	104	685	3,120
April	338	207	104	650	2,980
May	338	203	104	645	2,860

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Stocks reported by cobalt processors and consumers.

³Includes metal powder.

⁴Data may include other cobalt materials.

⁵Data from Defense National Stockpile Center. Includes material committed for sale pending shipment.

⁶Data based on monthly reports.

TABLE 4
U.S. IMPORTS FOR CONSUMPTION OF COBALT, BY COUNTRY¹

(Kilograms, gross weight of material, except as noted)

Period and country of origin	Metals ²		Oxides and hydroxides		Salts and compounds ³		Total cobalt content for the month ⁵	Cobalt content, year to date ^{5, 6}
	Quantity	Value ⁴	Quantity	Value ⁴	Quantity	Value ⁴		
2003:								
April	556,000	\$10,500,000	119,000	\$2,000,000	144,000	\$739,000	681,000	2,660,000
May	546,000	10,700,000	237,000	4,210,000	127,000	764,000	755,000	3,410,000
June	454,000	9,210,000	108,000	1,960,000	133,000	797,000	568,000	3,980,000
July	641,000	13,000,000	104,000	1,690,000	130,000	824,000	752,000	4,730,000
August	390,000 ⁷	8,440,000 ⁷	59,100	963,000	70,700	480,000	452,000	5,180,000
September	712,000	14,000,000	92,800	1,560,000	166,000	1,160,000	831,000	6,010,000
October	526,000	11,100,000	100,000	1,660,000	152,000	1,060,000	644,000	6,660,000
November	553,000	12,300,000	104,000	1,720,000	77,900	488,000	651,000	7,310,000
December	632,000	16,300,000	131,000	2,540,000	121,000	996,000	770,000	8,080,000
January-April	2,250,000	39,700,000	429,000	6,700,000	369,000	1,780,000	2,660,000	XX
January-December	6,700,000	135,000,000	1,370,000	23,000,000	1,350,000	8,350,000	8,080,000	XX
2004:								
January	525,000	17,100,000	131,000	2,710,000	172,000	1,620,000	677,000	677,000
February	862,000	25,400,000	139,000	3,940,000	178,000	2,380,000	1,020,000	1,700,000
March	680,000	29,900,000	126,000	4,290,000	119,000	1,030,000	804,000	2,500,000
April:								
Australia	71,100	3,370,000	--	--	--	--	71,100	155,000
Belgium	37,900	1,780,000	10,200	430,000	--	--	45,300	322,000
Brazil	6,000	227,000	--	--	--	--	6,000	6,360
Canada	86,000	3,290,000	--	--	--	--	86,000	623,000
China	73,500	3,930,000	13,000	333,000	--	--	82,800	256,000
Colombia	--	--	--	--	--	--	--	518
Finland	40,300	2,360,000	29,600	1,140,000	80,600	1,450,000	89,300	352,000
France	14,300	619,000	2,500	136,000	--	--	16,100	33,800
Germany	17,200	866,000	--	--	--	--	17,200	17,200
India	--	--	--	--	40,000	360,000	10,800	26,800
Italy	--	--	538	17,700	--	--	387	387
Japan	12,200	779,000	--	--	8,940	110,000	14,400	59,200
Korea, Republic of	1,490	85,200	--	--	--	--	1,490	5,830
Netherlands	--	--	20	6,770	--	--	14	14
Norway	74,000	2,910,000	--	--	--	--	74,000	556,000
Philippines	--	--	--	--	--	--	--	3,000
Russia	116,000	6,440,000	--	--	--	--	116,000	536,000
South Africa	40,400	1,290,000	--	--	--	--	40,400	59,000
Spain	--	--	--	--	--	--	--	1,120
Sweden	--	--	--	--	--	--	--	3,370
Switzerland	93	3,990	--	--	--	--	93	4,640
Taiwan	100	4,200	--	--	--	--	100	850
United Kingdom	325	30,000	25,300	563,000	--	--	18,500	42,000
Zambia	--	--	--	--	--	--	--	125,000
Total	591,000	28,000,000	81,100	2,630,000	130,000	1,910,000	690,000	3,190,000
January-April	2,660,000	100,000,000	477,000	13,600,000	599,000	6,950,000	3,190,000	XX

XX Not applicable. -- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Unwrought cobalt, excluding alloys; includes cobalt cathode and cobalt metal powder; may include intermediate products of cobalt metallurgy.

³Includes cobalt acetates, cobalt carbonates, cobalt chlorides, and cobalt sulfates.

⁴Customs value.

⁵Estimated from gross weights.

⁶May include revisions to prior months.

⁷All or part of these data have been referred to the U.S. Census Bureau for verification.

Source: U.S. Census Bureau, with adjustments by the U.S. Geological Survey.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF ADDITIONAL COBALT MATERIALS, BY COUNTRY ¹

(Kilograms, gross weight of material, except as noted)

Period and country of origin	Unwrought cobalt alloys		Cobalt waste and scrap		Wrought cobalt and cobalt articles	
	Quantity	Value ²	Quantity	Value ²	Quantity	Value ²
2003:						
April	5,170	\$152,000	20,500	\$253,000	15,500	\$933,000
May	1,510	46,000	55,100	558,000	20,400	1,220,000
June	3,010	33,900	15,100	256,000	13,700	1,050,000
July	230	14,600	30,600	175,000	18,400	1,280,000
August	440	23,500	86,200	618,000	14,400	787,000
September	475	13,000	10,700	126,000	9,410	646,000
October	8,170	84,200	47,900	324,000	11,300	810,000
November	2,870	83,200	68,700	479,000	11,300	646,000
December	2,140	66,400	53,400	432,000	13,100	1,010,000
January-April	10,200	352,000	114,000	1,000,000	55,200	3,270,000
January-December	29,000	717,000	482,000	3,970,000	167,000	10,700,000
2004:						
January	2,250	100,000	48,900	614,000	11,400	807,000
February	4,450	118,000	152,000	1,500,000	20,000	856,000
March	6,630	363,000	102,000	1,030,000	20,500	1,290,000
April:						
Austria	--	--	51,000	121,000	--	--
Belgium	--	--	6,720	231,000	610	35,900
Canada	--	--	--	--	1,960	346,000
China	--	--	--	--	59	7,570
Congo (Kinshasa)	9,950	477,000	--	--	--	--
Czech Republic	--	--	--	--	1	3,090
Denmark	--	--	1,660	20,300	--	--
France	49	4,600	10,400	139,000	1,230	107,000
Germany	3,130	58,200	--	--	17	2,500
Ireland	--	--	8,480	119,000	--	--
Japan	150	7,920	5,130	29,100	1,050	50,400
Taiwan	--	--	--	--	76	2,970
United Kingdom	--	--	39,800	531,000	5,420	288,000
Total	13,300	548,000	123,000	1,190,000	10,400	843,000
January-April	26,600	1,130,000	427,000	4,340,000	62,400	3,790,000

-- Zero.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Customs value.

Source: U.S. Census Bureau, with adjustments by the U.S. Geological Survey.

TABLE 6
U.S. EXPORTS OF COBALT MATERIALS¹

(Kilograms, gross weight of material, except as noted)

Period	Unwrought cobalt, powders, matte, waste and scrap ²		Oxides and hydroxides		Salts and compounds ³		Total cobalt content for the month ⁵	Cobalt content, year to date ^{5,6}
	Quantity	Value ⁴	Quantity	Value ⁴	Quantity	Value ⁴		
2003:								
April	205,000	\$3,330,000	66,000	\$936,000	146,000	\$672,000	288,000	791,000
May	220,000	3,600,000	14,200	340,000	27,800	158,000	237,000	1,030,000
June	232,000	4,770,000	18,600	238,000	9,710	54,600	248,000	1,280,000
July	191,000	6,570,000	43,000	845,000	41,800	294,000	232,000	1,510,000
August	187,000	4,270,000	17,400	338,000	56,600	324,000	213,000	1,720,000
September	227,000	3,980,000	15,200	191,000	10,000	57,100	240,000	1,960,000
October	184,000	2,890,000	9,310	166,000	118,000	603,000	219,000	2,180,000
November	137,000	3,650,000	54,500	1,010,000	70,600	447,000	193,000	2,370,000
December	306,000	6,820,000	29,500	778,000	46,200	259,000	338,000	2,710,000
January-April	609,000	12,100,000	174,000	2,210,000	235,000	1,170,000	791,000	XX
January-December	2,290,000	48,600,000	375,000	6,110,000	615,000	3,370,000	2,710,000	XX
2004:								
January	183,000	4,730,000	36,600	1,430,000	75,500	458,000	228,000	228,000
February	214,000	9,000,000	80,500	3,750,000	65,800	761,000	288,000	516,000
March	232,000	9,740,000	11,400	359,000	78,700	708,000	260,000	776,000
April	154,000	6,530,000	14,600	531,000	82,700	867,000	185,000	960,000
January-April	784,000	30,000,000	143,000	6,070,000	303,000	2,790,000	960,000	XX

XX Not applicable.

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²May include other intermediate products of cobalt metallurgy and unwrought cobalt alloys.

³Cobalt acetates and cobalt chlorides.

⁴Free alongside ship (f.a.s.) value.

⁵Estimated from gross weights.

⁶Year to date may include revisions to prior months.

Source: U.S. Census Bureau, with adjustments by the U.S. Geological Survey.

TABLE 7
U.S. EXPORTS OF WROUGHT COBALT, COBALT ORE, AND CONCENTRATES¹

(Kilograms, gross weight of material, except as noted)

Period	Wrought cobalt and cobalt articles		Cobalt ore and concentrates	
	Quantity	Value ²	Quantity	Value ²
2003:				
April	71,900	\$2,210,000	2,680 ³	\$24,100 ³
May	56,100	2,060,000	53,000 ³	705,000 ³
June	100,000	2,940,000	238,000 ³	257,000 ³
July	69,200	2,240,000	33,100 ³	372,000 ³
August	65,500	2,720,000	73,700 ³	473,000 ³
September	89,600	3,090,000	32,100 ³	149,000 ³
October	116,000	3,150,000	74,400 ³	979,000 ³
November	97,000	2,440,000	29,000 ³	559,000 ³
December	83,300	2,470,000	76,000 ³	1,990,000 ³
January-April	328,000	10,200,000	7,620	80,700
January-December	1,010,000	31,300,000	617,000	5,560,000
2004:				
January	50,900	2,400,000	126,000	4,320,000
February	94,600	3,680,000	295,000	3,290,000
March	77,000	3,840,000	123,000	6,140,000
April	78,100	3,300,000	110,000	1,600,000
January-April	301,000	13,200,000	655,000	15,400,000

¹Data are rounded to no more than three significant digits; may not add to totals shown.

²Free alongside ship (f.a.s.) value.

³All or part of these data have been referred to the U.S. Census Bureau for verification.

Source: U.S. Census Bureau, with adjustments by the U.S. Geological Survey.